Rhodora

JOURNAL OF THE

NEW ENGLAND BOTANICAL CLUB

Conducted and published for the Club, by

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Vol. 22. September, 1920 No. 261.

CONTENTS:

Francis Eugene McDonald. *V. H. Chase* 145
Additional Notes on Amelanchier. *K. M. Wiegand* 146
A teratological Aralia hispida. *Harold St. John* 152
A northeastern Variety of Panicum. *H. K. Svenson* 154
Gaultheria procumbens, forma suborbiculata, n. f. *M. L. Fernald* 155
Marsilea quadrifolia in Maine. *L. H. Coburn* 156
Lactuca hirsuta, forma calvifolia, n. f. *M. L. Fernald* . . . 156

Boston, Mass.
1052 Exchange Building

Providence, R. I.
Preston and Rounds Co.

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Address manuscripts and proofs to
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Subscriptions, advertisements, and business communications to
W. P. RICH, 300 Massachusetts Avenue, Boston, Mass.

Single copies may be had from
E. L. RAND, Corresponding Sec'y N. E. Botanical Club,
1052 Exchange Building, Boston, Mass.

Entered at Boston, Mass., Post Office as Second Class Mail Matter.

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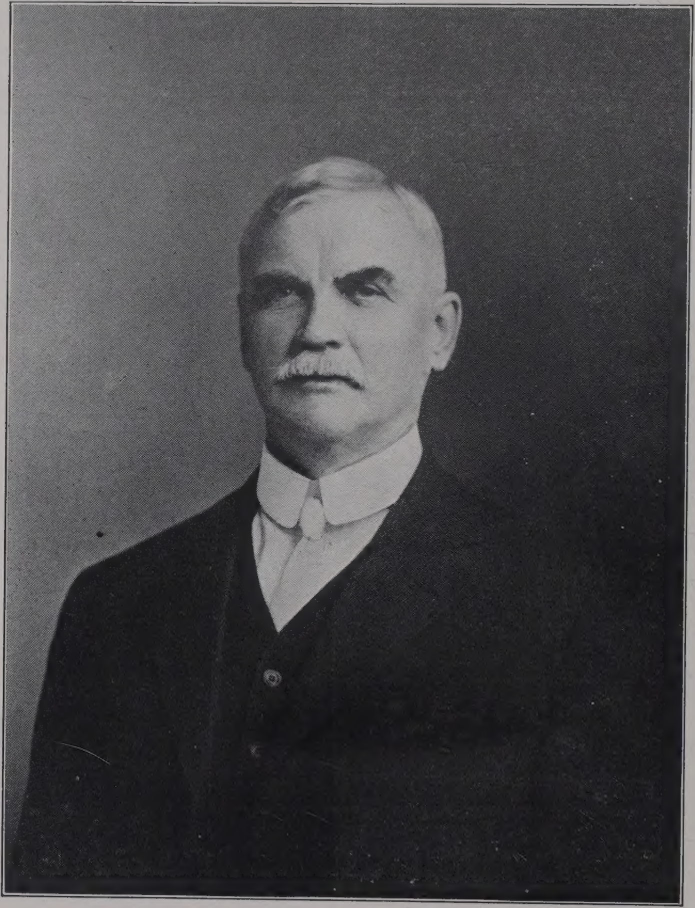

Very truly yours
J. E. McDonald

Rhodora

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THE NEW ENGLAND BOTANICAL CLUB

Vol. 22. September, 1920. No. 260.

FRANCIS EUGENE M'DONALD

Virginius H. Chase.

(With Portrait)

Francis Eugene McDonald was born at Wyanet, Illinois, Feb. 23, 1860. The family moved to Peoria in his childhood and he received his education in that town. After completing his school days, F. E. McDonald took up the study of law under Judge Bigelow. He stood third in a class of twenty-six and was admitted to the bar, January 8, 1883. He had taken the law course because his mother wished it, but controversies and quarrels were so absolutely contrary to his nature that he never could bring himself to practice his profession.

On account of the illness of his father, who was in the railway mail service, he took his place for some months as railway mail clerk between Galva and Quincy, Ill., and in 1884 was given a regular appointment between Rock Island, Ill., and St. Louis, Mo., which he held up to the time of his death.

As a child he greatly admired a little "herbarium" prepared by his mother in her school days, but just how great his admiration for it was she never realized until she thoughtlessly gave it away. Before many years he began to collect and prepare herbarium specimens for himself, and by the time he was married, Sept. 25, 1890, to Miss Ida Trine of Chicago, he had a large local collection. He added to this by exchange with all the best collectors in the country, until at the time he sold it to the University of Illinois, about ten years ago, it numbered over ten thousand specimens.

His numerous correspondents were always delighted with the ample, beautifully prepared specimens. He never sent out a poor specimen or gave one space in his own herbarium. Taking up the study of the local flora just about the time Dr. Brendel was laying it down, he derived much pleasure from finding species overlooked by the Docter, and in watching the introduction of many new weeds. His beautifully prepared book of records is now one of my most treasured possessions. I hope it may be published as a fitting companion to Dr. Brendel's Flora Peoriana and as a real contribution toward a state flora.

Except for a few notes his writing never appeared in print, but his beautiful specimens are in most public herbariums and in many private ones, and have helped many a student in understanding difficult species.

After disposing of his general herbarium he devoted his study almost entirely to mosses, of which he had a large collection from all parts of the world, although especially rich in Illinois material. His interest in plants never faltered. Twice the past summer he visited the Starved Rock region for mosses, and during his last illness he had botanical magazines on his bed to read when he was able. He died of pneumonia at his home in Peoria on Jan. 30, 1920, leaving a wife and son. Truly one of Nature's noblemen, he is now laid to rest in his beloved "Springdale" among whose wooded hills he has gone to welcome the coming of the springtime.

Peoria, Illinois.

ADDITIONAL NOTES ON AMELANCHIER.

K. M. Wiegand

It is now eight years since the writer contributed to this Journal two articles on the Amelanchiers of Eastern North America (Rhodora, xiv. 117, and 239. 1912). During this time a large quantity of material has been received, and much information has been accumulated relating to the species in Eastern America. In the light of this increased knowledge it is now apparent that several forms which gave trouble at that time are really good species. These and others are presented in the following pages.

A. INTERMEDIA Spach, Hist. Veg. ii. 85, (1834).—A tall shrub, rarely a small tree, widely branching near the ground or at first growing in clumps: winter buds dark brown: leaves elliptic-oblong or elliptic-obovate on the shoots; base rounded; apex acute; margin finely but somewhat distantly serrate, the serrations slightly more distant on the shoots; veins irregular; surface moderately tomentose when young, slightly so at maturity on the veins beneath and on the petiole; young leaves often reddish: racemes short (2–4 cm. long), 5–8-flowered, sparingly hairy: lower pedicels 8–14 mm. long: hypanthium cup-shaped, sparingly hairy outside: sepals short (2–3 mm. long), irregularly recurved, hairy on the inner face: petals short (7–8 mm. long), oblong-cuneate: summit of the ovary glabrous or somewhat woolly: fruit dark purple, juicy: fruiting racemes short, subcorymbose: lower pedicels about 15 mm. long: tube of the hypanthium not prominent: sepals irregularly spreading. In boggy soil: western Vermont, central New York and western Pennsylvania to the mountains of North Carolina. VERMONT: Blueberry Hill Bog, Rutland, 1899, *W. W. Eggleston*, no. 1179, 1180 (probably). NEW YORK: Labrador Swamp, Fabius, 1914, *Wiegand*, nos. 2533 to 2538; Green Lake, Preble, 1914, *Wiegand*, nos. 2539 and 2542; Featherbed Bog, Victory, 1916, *Wiegand*, no. 6608; Miller's Bog, Spring Lake, Conquest, 1916, *Wiegand*, no. 6609; Lowery's Pond, Junius, 1914, *Wiegand*, no. 2540 & 2541; Round Marshes, Dryden, 1882, *W. R. Dudley*, also 1913, *Eames & MacDaniels*, nos. 644 & 646, also 1914, *Wiegand*, nos. 2524 to 2532; South Hill Marsh, Ithaca, 1914, *Wiegand*, also *Wiegand & Eames*, nos. 2512 to 2520; Michigan Hollow Swamp, Danby 1913, *Eames & MacDaniels*, no. 645, also 1914, *Eames & Wiegand*, nos. 2521 to 2523. PENNSYLVANIA: Half-moon Swamp, Mercer County, 1906, *O. E. Jennings;* Moosic, 1907, *A. Twining*. NORTH CAROLINA: Macon County, mountain swamp, 1912, *T. G. Harbison*, no. 917, and Highlands, 1918, *Harbison*, no. 9, 1919, *Harbison*, no. 194; Orange County, 1919, *Harbison*, no. 23.

As long ago as in 1886 Dudley (*Cayuga Flora*, p. 34) called attention to this plant, listing it as "*A. canadensis*, Torr. and Gray; (form). (In sphagnum marshes, and agreeing with var. *oligocarpa* in character of the leaf and length of petals, but racemes usually have 4–6 flowers.) Round Marshes. South Hill Marsh." In the first of the above cited papers in RHODORA (p. 135 and 149) the writer again called attention to it, noting its affinity with *A. oblongifolia*. Since that time the plant has continued to give trouble in Central New York, where it is abundantly distinct from any local species; yet in all this time it has not been reported from outside the New York region. Species with a limited range of this sort occur very exceptionally in New York State, and then under special conditions. Consequently the recognition of this plant as a species has been delayed with the hope that more information might give it a natural range. A study of additional material in the Gray Herbarium and the herbarium of the Arnold Arboretum now shows that the plant has a typical Alleghanian range. Ashe has recently cited (Bull. Torr. Bot. Club, xlvi. 222, 1919) what is presumably the same plant as "frequent in bogs near Beltsville, Maryland." One of the specimens cited above from North Carolina is from the Piedmont Region; so the plant probably ranges over this region as well as in the mountains. Very likely it extends also to the mountains of Georgia. There is in the Gray Herbarium a fragmentary flowering specimen supposed to have come from Spach and labelled *A. intermedia.* So far as can be determined, this fragment agrees perfectly with our plant. Since Spach's description also agrees sufficiently well, it has seemed safe to adopt this name for the plant in question. It is probably a part of the *A. canadensis* var. *obovalis* of Sargent's *Silva* (iv. 129, 1892), but not *A. obovalis* of Sargent's *Manual of Trees.* It is also *A. intermedia,* in part, of Britton's publications. Most authors have confused it with *A. oblongifolia* of the Coastal Plain, and also to some extent with *A. canadensis. A. intermedia* is most closely related to *A. oblongifolia.* If it grew on the Coastal Plain it would be mistaken for a hybrid of that species and *A. laevis,* as it seems to combine the characters of these two species. It is more distantly related to *A. canadensis,* which, however, is an entirely different plant. The three species may be contrasted as follows.

	A. INTERMEDIA	A. OBLONGIFOLIA	A. CANADENSIS
Range:	Piedmont and Alleghany Mountains.	Coastal plain.	Piedmont and westward.
Habitat:	Bogs.	Swamps.	Uplands.
Habit:	Alder-like.	Alder-like.	More arborescent.
Leaf:	Oblong, acute, of shoots more *laevis*-like, becoming subglabrate, often reddish when young; teeth fine, more distant.	Oblong, obtuse or acute, not *laevis*-like, becoming subglabrate, not reddish when young; teeth fine, close.	Ovate or obovate, acute or acuminate usually permanently hairy except far south and west, not reddish when young; teeth medium, sharp, broad-based.
Sepals:	Narrowly deltoid, irregularly recurved.	Narrowly deltoid, erect-spreading.	Broadly ovate, abruptly reflexed.
Fruit:	Dark, juicy.	Dark, juicy.	Red-purple, dry or juicy-mealy.

In the summer of 1912 Professor M. L. Fernald collected a quantity of a strange Amelanchier on the Magdalen Islands, and in 1914 in western Newfoundland. The writer is inclined to agree with Fernald that this is an undescribed species of the region about the Gulf of St. Lawrence, a similar plant having been secured by Fernald in Gaspé Co., Quebec. It inhabits lime barrens or strongly calcareous gravelly shores and swamps, and may be described as follows:

A. **Fernaldii**, sp. nov., humilis 3–6 dm. alta diffusa stolonifera subcaespitosa, foliis ad anthesin semiexpansis glabris et viridibus, maturitate submagnis 5–8 cm. longis, late elliptico-oblongis vel subobovatis, basi rotundatis vel subcordatis, apice subacutis, margine e basi ad apicem dentibus mediocribus acute serratis, laminis glabris subtus paullo pallidioribus irregulariter venosis, petiolis tenuibus sparce villosis; racemis multi- vel pauci-floris glabris laxis, pedicellis inferioribus 1.5–3 cm. longis, hypanthio submagno 5 mm. lato campanulato, sepalis 3–4 mm. longis lanceolato-deltoideis irregulariter divaricatis vel recurvatis conspicuis glabris vel intus subtomentosis, petalis liguliformibus 1–1.5 cm. longis, ovario ad apicem tomentoso, fructo atropurpureo succulento, tubo hypanthii paulo evoluto, pedicellis fructiferis saepe 3-4 cm. longis. Western Newfoundland and the Magdalen Islands to the coast of Quebec, and apparently some distance up the St. Lawrence river. NEWFOUNDLAND: limestone tableland of Table Mountain, Port à Port Bay, 1914, *Fernald & St. John*, no. 10840 & 10842. MAGDALEN ISLANDS: Grindstone, 1912, *Fernald, Long & St. John*, no. 7592 (TYPE in Gray Herb.), also nos. 7589 & 7590, also *Fernald, Bartram, Long, & St. John*, no. 7586; between East Cape and East Point, Coffin Island, 1912, *Fernald, Bartram, Long & St. John*, no. 7587. QUEBEC: banks of the Grand River, Gaspé Co., 1904, *Fernald;* Isle aux Coudres, 1917, *Bro. M. Victorin*, no. 4318 (apparently this species).

This plant at first glance suggests a hybrid between *A. laevis* and *A. stolonifera*, but *A. stolonifera* is not a plant of lime barrens, and has not been found in the region from which this plant was collected. Moreover the leaves of our plant are never hairy. It suggests also a combination of *A. Bartramiana* and *A. laevis*, but the leaves are too blunt. The plant wherever found gives the impression of being the same, and seems to form a definite unit, not a fluctuating hybrid. *A. Fernaldii* is not to be confused with *A. sanguinea*, var. *gaspensis* which has coarse teeth, more parallel veins, and a more pronounced hypanthium-tube.

A. **grandiflora**, comb. nov. *A. sanguinea*, forma *grandiflora* Wiegand, RHODORA, xiv. 139 (1912). *A. sanguinea*, var. *grandiflora* Rehder in Standard Cyclop. Hort. i. 272 (1914).—A more extended acquaintance with this plant in central New York has led to the opinion that it is specifically distinct from *A. sanguinea.* The hypanthium is much broader and more shallow (saucer-shaped), the petals are longer, and there are other distinctive characteristics given in the table under the next species. Its range, so far as known at present, is from central and western New York to Ontario. In central New York it inhabits the crests and ledges of shale cliffs bordering the ravines and lake shore. These cliffs are usually more or less calcareous. The plant is probably a calciphile, but this should be verified. NEW YORK: Paine's Creek Ravine, Ledyard, 1916, *Wiegand* no. 6589, 6589a, 6592; King's Ferry, Genoa, 1916, *Wiegand,* no. 6590; Portland Point, Lansing, 1916, *MacDaniels & Wiegand,* no. 6591; Esty's Glen, Lansing, 1914, *Wiegand,* no. 2497; McKinney's Glens, Lansing, 1897, *Wiegand,* also 1914, *F. P. Metcalf,* no. 2496; Cayuga Heights Road, Ithaca, 1914, *Wiegand,* no. 2498; Fall Creek Ravine, Ithaca, 1897, *Wiegand* (type of f. *grandiflora,* in Gray Herb.), also 1914, *Wiegand,* no. 2501, also *A. J. Eames* no. 2502 & 2506; Enfield Ravine, 1914, *Eames & MacDaniels,* no. 2508; Elm Beach, Romulus, 1915, *A. J. Eames,* no. 4288; Hemlock Lake, Canadice, 1915, *C. C. Thomas,* no. 4289; along the Genesee River in the Rochester parks, *B. H. Slavin.* ONTARIO: vicinity of Ottawa, 1898, *J. M. Macoun,* no. 20074; Guelph, 1904, *A. B. Klugh* (probably this); Gravehurst, 1897, *Biltmore Herb.* no. 5664.

A. **huronensis**, sp. nov., frutex vel arbor parva 3–7 m. alta, foliis ad anthesin semiexpansis maturitate magnis oblongo-ovalibus vel suborbicularibus vel late obovatis 4–7 cm. longis, 3.5–5.5 cm. latis, basi rotundatis vel plerumque cordatis, apice rotundatis vel rare subacutis, margine basi ad apicem argute et crasse serrato-dentatis, subtus juventate tomentosis maturitate leviter tomentosis, nervis conspicue pinnatis sed ad apicem irregularibus, petiolis tenuibus, racemis multifloris ad anthesin subdensis subtomentosis, pedicellis inferioribus 15–20 mm. longis, hypanthio subglabro mediocri vel magno 6–8 mm. lato alte patelliformi, petalis mediocribus obovato-linearibus apice latis 12–16 mm. longis, ovario ad apicem tomentoso, fructo atropurpureo succulento, tubo hypanthii in fructo juniore conspicuo, sepalis longis et manifestis, fl. 3–3.5 mm. longis fr. 4–5 mm. longis, pedicellis fructiferis, 20–30 mm. longis.—Sandy soil, Lake Huron, Lake Michigan and Lake Superior. MICHIGAN: Partridge Point near Alpina, 1895, *C. F. Wheeler;* Alpina, 1907, *C. K. Dodge,* no. 56; Sand Point, Huron County, 1908, *Dodge,* no. 74, also 76 (type in Gray Herb.); Stony Island, Saginaw Bay, 1908, *Dodge,* no. 75; lake shore, Keweenaw County, 1916, *Goessl,* no. 38709. WISCONSIN: Washington Island, Door County, 1916, *C. Goessl,* no. 39104; Ellison Bay, Door County, 1916, *Goessl,* no. 39000; on limestone, Ozaukee County, 1909, to 1912, *H. V. Ogden,* nos. 12 to 16.

This plant is a close relative of *A. grandiflora* and *A. sanguinea.* From the former it differs in the broad obtuse leaves with more persistent tomentum, more regular veins and slightly shorter petals. From the latter it differs in the more obtuse leaves, much larger hypanthium, longer petals, and more open fruiting inflorescence. The plant grows on sand dunes in Michigan but on limestone rocky banks in other portions of its range. These two soils at first seem contradictory in nature, but the sands of Huron County are underlaid by limestone, and are, judging from other plants in the vicinity, more or less calcareous. *A. huronensis* is probably a calciphile. This species together with *A. humilis* probably forms the basis of the records of *A. florida* Lindl. from the region of the Great Lakes.

	A. HURONENSIS	A. GRANDIFLORA	A. SANGUINEA
Soil:	Calciphile.	Calciphile.	Neutral or acid clay or gravel over sandstones.
Habit:	Not in clumps.	Not in clumps.	In substoloniferous clumps.
Leaves:	Broadly oval, obtuse.	Ovate-oval, subacute.	Ovate-oval, subacute.
Veins:	Parallel.	Irregular, more *laevis*-like.	Parallel.
Tomentum:	Persistent.	Early deciduous.	Persistent.
Racemes:	Loose, lower pedicels long.	Loose, lower pedidels long.	Denser, lower pedicels short.
Lower pedicels:	Fl. 15-20 mm., fr. 20–30 mm., long.	Fl. 27–40 mm., long, fr. the same.	Fl. 7–10 mm., fr. 7–25 mm. long.
Hypanthium	Large, 6–8 mm. broad.	Large, 7–9 mm. broad.	Small, 3.5–6 mm. broad.
Petals:	12–16 mm. long, broad.	16–22 mm. long, medium.	2–14 mm. long, narrow.
Length of sepals:	3–3.5 mm. in fl., 4–5 mm. in fr.	4.5–5 mm. long.	2–3 mm. long.
Fresh anthers:	0.6 mm. long.?	1.0 mm. long.	0.6 mm. long.

Farwell (Rep. Mich. Acad. Sci. xvii. 172, 1916) has attempted to show that the name *Mespilus canadensis* L. should be applied to what the writer has called *A. laevis*. The status of this name was discussed at length in RHODORA (xiv. 121). The writer there held that it is at present impossible to say what Linnaeus meant in the *Species Plantarum*. The description and the reference to Gronovius (as far as Gronovius's critical statement is concerned) refer to different plants. We are first able to place the name definitely in the *Systema*, ed. 12, where it clearly applies to the arborescent hairy-leaved form.

CORNELL UNIVERSITY, Ithaca, New York.

A TERATOLOGICAL SPECIMEN OF ARALIA HISPIDA

Harold St. John.

In certain genera and species as, for instance, in several species of *Trillium,* monstrosities are of frequent occurrence[1]. On the other hand most plants develop with a remarkable trueness to type and teratological forms are very uncommon. *Aralia hispida* Vent. is one of the latter class. Neither the Gray Herbarium nor the Herbarium of the New England Botanical Club contains any such forms, nor has a prolonged search revealed any published records of the discovery of any such specimens in America.

Consequently, a specimen collected by Miss I. W. Anderson on the side of Rattlesnake Mt., Tyrone, Blair Co., Pa., Aug. 20, 1915, is of decided interest. It is a vigorous plant 8 dm. tall with a normal root-system and abundant normal foliage. Its inflorescence, however, is very far from normal. From a distance, instead of the round-topped umbels with white flowers or dark angular fruits, one sees the umbels, but these are crowned by tufts of green leaves. A closer examination reveals that the ovaries instead of being semi-globose urceolate as in the normal flower, are wrinkled slender clavate affairs scarcely distinguishable from the peduncles. Some of the flowers at first sight appear nearly normal except for their brownish or greenish tone and undeveloped ovaries. If, however, these are dissected, it will be seen that the sepals are in many cases normal, are short triangular lobes; that the petals are brownish and shriveled or developed into green leaves, instead of clear white oblong-lanceolate petals, 2.5 mm. long; that the filaments are dark and shriveled, 1 mm. long, instead of light-colored, 2 mm. long; that the anthers are dark yellowish brown, .75 mm. long, instead of light yellowish, 1.5 mm. long; that the stylopodium is conical, 1 mm. long, instead of 1.5 mm. long.

Many of the flowers, especially the central ones of the umbels, show, instead of this dwarfing and slight malformation, a very abnormal development. One of them has the perianth slightly foliaceous. The stamens are shrunken and abnormal as described above. From the center of the flower, instead of a stylopodium, springs a prolongation of the axis, which 4 mm. above, bears a tuft of green serrate normal leaves, each of the lowest being subtended by an abortive stamen. This flower illustrates phyllody of the perianth and median leafy and floral prolification.

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[1] For a summary of the recorded facts and a bibliography, see Gates, R. R.: Ann. Mo. Bot. Gard. iv. 69 (1917).

Another flower has its perianth green and leaf-like and the stamens similarly abnormal. From the center of the flower the axis is prolonged, bearing 4 mm. above a pair of opposite bracts, then 3 mm. above these a proliferous flower having its perianth foliaceous and bearing on the disc a tuft of green leaves, most of which subtend an abortive stamen.

Still another flower had the perianth enlarged and foliaceous and within it the same type of abortive stamens. From the center of the flower the axis is prolonged and 7 mm. above bears normal involucral bracts subtending 7 rays. These are about 4 mm. long and each bears a flower with a foliaceous perianth subtending abnormal stamens and on the center of the disc a tuft of green leaves. It is probable that dissection of more of the flowers would show still other types of abnormality, but those already described illustrate sufficiently the abnormal infloresence of this monstrosity in *Aralia hispida*. Nowhere does the plant show any sign of an injury that might have been the cause of such an abnormal development.

Gray Herbarium.

A NORTHEASTERN VARIETY OF PANICUM

H. K. Svenson.

For several summers there has been found on the sandy shores of ponds in Plymouth County and Cape Cod, Massachusetts, a *Panicum* which seems to bridge the gap between the sections *Dichotomiflora* and *Capillaria* as these groups are treated in Hitchcock & Chase's "North Amerian Species of Panicum." Although showing undoubted connection with *P. dichotomiflorum* Michx., it has the low, slender habit, diffuse ovoid panicles, and small, long-pedicelled spikelets, that are characteristic of *P. Tuckermanni* Fernald[1] and *P. Gattingeri* Nash. There is furthermore a tendency toward pubescence, although many specimens are glabrous. Transitional forms show distinctly the relation to the typical *P. dichotomiflorum*. Both *P. Tuck-*

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[1] Rhodora, XXI, 112 (1919).

ermanni and *P. Gattingeri* have a much denser pubescence, more pointed spikelets, and pubescent nodes. The form under discussion has glabrous nodes. From *P. capillare* it can be distinguished by the glabrous pulvini.[1]

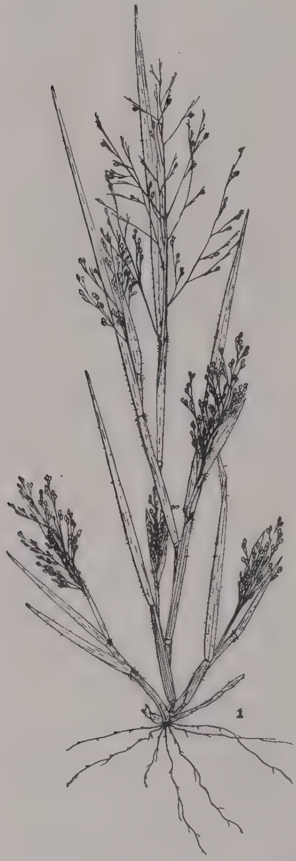

Fig. 1. P. dichot. v. puritanorum × 0.3

So far as is known this plant occurs only on the sandy pond-shores of southeastern Massachusetts. It is distinguished from the typical *P. dichotomiflorum* by low habit, and scattered inflorescence of small, *blunt* spikelets with long pedicels. Most characteristic are the second glume and sterile lemma which are somewhat membranaceous, and have a tendency to spread and wither at maturity, exposing the fruit. This plant is worthy of varietal separation as:

Panicum dichotomiflorum Michx., var. **puritanorum**, n. var., annuum, culmis plerumque erectis rare decumbentibus vel solitariis vel numerosis furcatisque, 0.5–6 dm. longis ubique foliosis; vaginibus glabris vel pilosis, laminis 2–40 cm. longis, 0.1–8 mm. latis longe acuminatis laxe adscendentibus glabris vel hispidis; paniculis numerosis vel solitariis, primariis breviter exsertis, late ovoideis, 3–25 cm. longis; ramis primum adscendentibus deinde divergentibus vel rare reflexis, pulvinis glabris; spiculis ovoideis, longe pedicellatis, 1.8–2.2 mm. longis, 0.8–1.1 mm. latis obtusis vel acutiusculis, gluma prima deltoideo-orbiculare spiculo quater vel quinquiens breviore; gluma altera et lemmate sterili 5–7-nervatis, submembranaceis caryopsin vix superantibus plerumque flaccidis vel ad maturitatem marcescentibus et caryopsin denudantibus.

Culms usually erect, solitary or numerous, simple or branching from base and nodes, 0.5–6 dm. long, leafy throughout: sheaths glabrous or pilose, blades 2–40 cm. long, 0.1–8 mm. broad, long-acuminate, loosely ascending, glabrous or hispid: panicles solitary or many, short-exserted, broadly ovoid, 3–25 cm. long; branches at first ascending, later divergent, rarely reflexed: pulvini glabrous; spikelets long-pedicelled, ovoid, 1.8–2.2 mm. long, 0.8–1.1 mm. broad, blunt or somewhat pointed: first glume deltoid-orbicular, one-fifth to one-fourth the length of the spikelet; second glume and sterile lemma equal, 5–7-nerved, slightly exceeding the fruit, submembranaceous, usually withering and exposing the fruit at maturity.—Plymouth and Barnstable counties, Massachusetts. The following specimens are characteristic: Massachusetts: Plymouth, *Oakes* (in Gray Herb.); damp sandy beach, Boot Pond, Plymouth, Sept. 6, 1913, *Fernald et al.*; damp sandy beach, Great South Pond, Plymouth, Sept. 6, 1913, *Fernald;* gravelly and sandy beach, Little Sandy Pond, Plymouth, Aug. 7, 1918, *Fernald & Clark;* sandy shore, Bang's Pond, Harwich, Sept. 16, 1916, *Clark & Hunnewell;* dry sandy and gravelly beach, Half-way Pond, Barnstable, Sept. 13, 1919, *Fernald* (type in Gray Herb.); sandy beach, Crooked Pond, Falmouth, Aug. 23, 1919, *Fernald & Long;* sandy beach, Long Pond, Falmouth, Oct. 4, 1919, *Fernald.*

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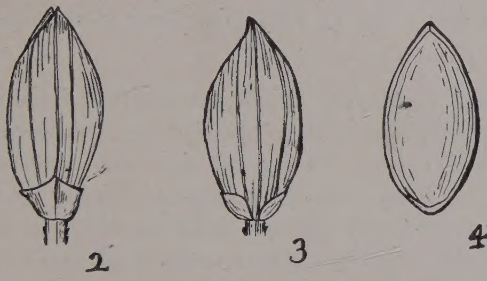
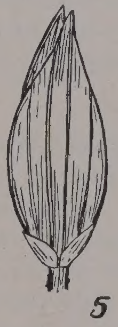
[1] For elucidation of this character see Rhodora, l. c. III.





Figs. 2–4. P. dichot. v. puritanorum. Spikelets × 15.
Fig. 5. P. dichot. typical. Spikelet × 15.

Occasional specimens, with small pointed spikelets, which are clearly transitional forms, are found in eastern Massachusetts and at one or two stations in the Connecticut Valley.

Harvard University.

Gaultheria procumbens, L., forma **suborbiculata**, n. f. foliis suborbiculatis vel late ovatis vel late obovatis basi apiceque rotundatis plerumque 2.5–4 cm. latis.

Leaves suborbicular, broad-ovate or broad-obovate, rounded to base and apex, mostly 2.5–4 cm. broad.—Massachusetts: damp thicket and border of woods, Harwichport, Harwich, May 11, 1919, *Fernald,* no. 18,921 (TYPE in Gray Herb.), July 18, 1919, *Fernald & Long,* no. 18,922.

A striking extreme of *Gaultheria procumbens* in its large rounded leaves. The form occupies an area of several square rods where it is uniform but at the upper margin of the area abruptly gives way to the ordinary form of the species with narrower more elliptic leaves narrowed to base and apex.—M. L. FERNALD, Gray Herbarium.

MARSILEA QUADRIFOLIA IN MAINE.—In September 1919 I found a quantity of *Marsilea quadrifolia* on the surface of the little pond in our public park in Skowhegan. This pond has been artificially shaped and enlarged, but is kept filled by natural springs. It has been planted with water-lilies, but no new planting has been done for three years. As I am a constant visitor to the Park and to the shore of the pond, this unusual little plant could not have escaped me if any of it had been there the year before. Yet when first observed it had already covered so much of the pond as to raise the question whether it would not choke out our water-lilies if not summarily dealt with. This spring, as the water is lowering, the Marsilea has already appeared on the surface in company with the lily pads.

Prof. M. L. Fernald informs me that he knows of only one previous record of Marsilea from Maine,—at Maranocook, where it was found in 1896[1]—LOUISE H. COBURN, Skowhegan, Me.

LACTUCA HIRSUTA Muhl., forma **calvifolia**, n. f., foliis subtus glabris.

Leaves glabrous beneath.—MAINE: slightly open places in dry sandy pine woods, frequent, Norway, August 1, 1919, *Eames & Godfrey,* no. 9657 (TYPE in Gray Herb.). MASSACHUSETTS: Falmouth, July 13, 1911, *Williams.* CONNECTICUT: Waterbury, August 27, 1912, *Blewitt,* no. 1428; Canton, August 14, 1901, *Driggs.*

Typical *Lactuca hirsuta,* as the name implies, has the midrib of the leaves (particularly the lower ones) hirsute beneath. The plants here set off are strictly glabrous and the Eames & Godfrey plant has the leaves extremely thin and membranous.—M. L. FERNALD, Gray Herbarium.

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[1] H. Metcalf, RHODORA, iii. 237, (1901).

Vol. 22, no. ~~259~~, including pages 129 to 144, was issued 23 September, 1920.

260

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